WHAT IS CLAIMED IS:

1. A jet nozzle structure for a soldering apparatus, comprising:

a tubular body formed on a soldering bath filled with molten solder;

an opening rim at a top of the tubular body forming a top opening to expose the molten solder for soldering electronic components placed on a specified local area of a substrate; and

one or more flow openings which are established on a side wall of the tubular body at a position lower than the opening rim by a predetermined distance;

wherein the molten solder circulates through the soldering bath, the tubular body, and the flow openings.

2. A jet nozzle structure for a soldering apparatus as defined in Claim 1, wherein a shape and size of the opening rim is determined based on a unique shape and size of the local area of the substrate to be soldered.

3. A jet nozzle structure for a soldering apparatus as defined in Claim 1, wherein said molten solder is lead-free solder which has higher solidus than that of lead containing solder.

4. A jet nozzle structure for a soldering apparatus as defined in Claim 1, wherein said molten solder is lead-free solder which has higher solidus than that of lead-free containing solder, and the amount of circulation of lead-free solder is set larger than that of lead containing solder by increasing an amount of flow of the molten solder from the flow openings.